

2. (Twice Amended) The magnetic recording medium as claimed in

claim 1, wherein said ferromagnetic layer is made of a material selected from a group consisting of Co, Ni, Fe, Ni alloys, Fe alloys, and Co alloys.

6. (Twice Amended) The magnetic recording medium as claimed in

claim 1, wherein said magnetic layer is made of a material selected from a group consisting of Co and Co alloys.

8. (Twice Amended) The magnetic recording medium claimed in claim

7, which further comprises:

a non-magnetic intermediate layer interposed between said underlayer and said exchange layer structure,

said non-magnetic intermediate layer having a hcp structure alloy selected from a group consisting of CoCr-M, where M = B, Mo, Nb, Ta, W or alloys thereof, and having a thickness in a range of 1 to 5 nm.

19. (Once Amended) The magnetic recording medium as claimed in

claim 1, which is configured and arranged for longitudinal magnetic recording.

20. (Once Amended) A magnetic recording medium for longitudinal

magnetic recording, comprising:

at least one exchange layer structure; and
a magnetic layer formed on said exchange layer structure, said exchange
layer structure including:

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and
a ferromagnetic layer having a thickness in a range of 2 to 10 nm;
a non-magnetic coupling layer provided on said ferromagnetic
layer and under said magnetic layer,
said ferromagnetic layer and said magnetic layer having antiparallel
magnetizations.

22. (Once Amended) A magnetic recording medium for longitudinal
magnetic recording, comprising:

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at least one exchange layer structure; and
a magnetic layer formed on said exchange layer structure, said exchange
layer structure including:
a ferromagnetic layer; and
a non-magnetic coupling layer, having a thickness in a range of
0.4 to 0.9 nm, provided on said ferromagnetic layer and under said magnetic layer,
said ferromagnetic layer and said magnetic layer having antiparallel
magnetizations.

23. (Once Amended) A magnetic recording medium for longitudinal magnetic recording, comprising:

at least one exchange layer structure; and

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a magnetic layer formed on said exchange layer structure, said exchange layer structure including:

a ferromagnetic layer; and

a non-magnetic coupling layer, having a thickness of approximately 0.8 nm, provided on said ferromagnetic layer and under said magnetic layer, said ferromagnetic layer and said magnetic layer having antiparallel magnetizations.

24. (New Claim) The magnetic recording medium as claimed in claim 1,

wherein said ferromagnetic layer is made of a material selected from a group consisting of CoCrTa, CoCrPt, and CoCrPt-M, where M = B, Mo, Nb, Ta, W or alloys thereof.

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25. (New Claim) The magnetic recording medium as claimed in claim 1,

wherein said magnetic layer is made of a material selected from a group consisting of CoCrTa, CoCrPt and CoCrPt-M, wherein M = B, Mo, Nb, Ta, W or alloys thereof.